

USSN 10/042,930
Page 5

REMARKS

With entry of this amendment, claims 1, 2, 3, 46 – 53, 57 – 59 and 62 – 65 are pending. Claims 1, 3 and 62 have been amended, and claims 63 – 65 are new. New matter has not been introduced by the instant amendment.

Claims 4 – 45, 54 – 56 and 60 – 61 have been canceled, and Applicants expressly reserve the right to prosecute claims drawn to canceled subject matter in one or more continuation, divisional or continuation-in-part applications.

Claim 1 has been amended to recite --Thermobrachium-- as opposed to "Thermofrachium" and to replace the term "species" with -- strain --. Applicants assert these changes do not affect the scope of the claim. Additionally, further defining thermophilic strain characteristics have been included in the claims, and support is found, for example at page 7, lines 17 – 30 of the disclosure. Claim 3 has been amended to recite the polyester poly(1,3-propylene) terephthalate (PPT). Claim 62 has been amended to include further defining thermophilic strain characteristics, and support is found in original claim 25, page 7, lines 17 – 30 and page 8, lines 4 – 9 of the disclosure. New claim 63, which depends from claim 62 further recites collecting the 1,3-propanediol. New claims 64 and 65 depend from claim 1 and include further characteristics of the thermophilic strain. Support is found in Table 2 of the examples.

Rejection under 35 U.S.C. §112, 1st paragraph.

The new matter rejection of claim 1 (and claims 2 – 4, 46 – 53 and 57 – 59 dependent therefrom) is rendered moot in light of the correction of the term "Thermofrachium" to "Thermobrachium".

Claims 1 – 4, 46 – 53, 57 – 59 and 62 have also been rejection under both the written description requirement and enablement requirement of 35 USC 112, paragraph 1.

With respect to the rejection under the written description requirement, Applicants contend even though only 1 representative strain of thermophilic organisms are taught, the specification conveys to those of skill in the art that Applicants had possession of the claimed subject matter. The claims are directed to a method of converting glycerol to 1,3-propanediol by a thermophilic strain of *Caloramator* or

GC582-C1AM -RCE

USSN 10/042,930

Page 6

Thermobrachium. Not only must the strain be capable of converting glycerol to 1,3-propanediol, but also the strain must have the following characteristics, 1) a temperature for growth at pH 6.0 of 33 – 60°C, a pH range for growth of 5.0 to 7.8 at 25°C, a 16S rDNA sequence which must have at least 95% sequence identity with the 16s rDNA sequence of ATCC deposit PTA-584 (strain JW/MS-VS5). These characteristics, along with other defining characteristics are disclosed at pages 7 – 8 of the disclosure.

Also as taught at pages 32 – 33 of the specification, an almost complete 16s rDNA gene sequence of strain JW/MS-VS5 comprising 1450 nucleotides was determined and deposited in the Genbank database under accession number AF181848 (see page 37). When the sequence of the new isolate was compared to five other *Caloramator* and *Thermobrachium* species the similarities were in the range of 91.3 to 93.7 % (Figure 3 and page 33 – 34).

With respect to enablement, Applicants assert that while a disparity may exist between the one specific example and the number of embodiments encompassed by the claims, the specification teaches how to make and use the invention and routine experimentation, not undue experimentation would be required. The specification teaches how to isolate a thermophilic organism (for example, see page 11 lines 1 – 15); identifying characteristics of the strains of *Caloramator* and *Thermobrachium* encompassed by the claims (for example, see page 7 starting at line 20 through page 8 line 15); methods of growing the thermophilic strains (for example, see page 11, lines 7 - 15); tests which are available to determine if a strain encompassed by the claims converts glycerol to 1,3-propanediol (for example, see page 11, lines 19 – 29 and page 27, lines 11 – 15) and hybridization tests and computer programs which are available to determine sequence identity (for example see pages 8, lines 18 through page 10, line 2).

Applicants assert the above support Applicants contention that there is evidence showing that those skilled in the art could make and use the claimed thermophilic strains of *Caloramator* and *Thermobrachium* using the procedures of the specification. Therefore, Applicants assert the claims are enabled by the specification and meet the written description requirement.

GC582-C1AM-RCE

USSN 10/042,930
Page 7

Provisional Double Patenting Rejection

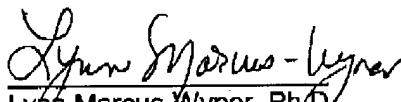
Applicants acknowledge the provisional double patenting rejection of some of the pending claims under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 , and 71 - 79 of co-pending Application No. 09/405,692. Applicants respectfully would like to hold the above rejections in abeyance until there is agreed upon patentable subject matter in the present application.

Additionally, as the Examiner correctly points out, the parent application, application serial number 09/405,692 was abandoned. A Notice of Allowance was received in the parent application but the application was inadvertently abandoned. Applicants have petitioned to revive the application and to date have not received a communication from the Office of Petitions on the outcome of this request.

Applicants respectfully submit that all pending claims of the captioned application are in condition for allowance and allowance of the application is kindly solicited.

Date: July 6, 2004

Respectfully submitted,


Lynn Marcus-Wyner, Ph.D.
Attorney for Applicants
Registration No. 34,869

Genencor International, Inc.
925 Page Mill Road
Palo Alto, CA 94304
Tel: 650-846-7620
Fax: 650-845-6504

GC582-C1AM -RCE